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EXAMINER

SEMENENKO, YURIY

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,266	Applicant(s) UENO ET AL.	
	Examiner YURIY SEMENENKO	Art Unit 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Amendment filed on 05/01/2009 has been entered.
Claims 1-9 are now pending in the application.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 9/1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Applicant is advised that should claim 5 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

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made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4.1. Claims 1 and 9/1 are rejected under 35 U.S.C. 102(e) as anticipated by Maeda (US 6590991) hereinafter Maeda or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suyama (US 5903076) hereinafter Suyama.

Regarding claim 1: Maeda discloses in fig. 10 -12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, the multifunctional vibrating actuator 20, fig. 1-7 having a diaphragm 8, a magnetic circuit (col. 1: 44-45) that is positioned facing the diaphragm 8 and that forms a magnetic path, a suspension 1 that supports the magnetic circuit, a housing 10 that supports the diaphragm 8 and the suspension 1, and voice coil 7 that produces magnetic drive that operates between the diaphragm 8 and the magnetic circuit, and having terminals 13 and 14, fig. 10 that are attached to the housing 10, fig. 1 and that are electrically connected to the voice coil 7, the structure for mounting comprises: a bracket 12 configured to be fixed to the surface of the circuit board 21, fig. 11 by solder reflow (col. 11:55-57), wherein the housing of the multifunctional vibrating actuator is configured to be detachable from the bracket so as to allow the bracket 12 to be fixed on the surface of the circuit board 21, fig. 10-12 without the multifunctional vibrating actuator 20, wherein the housing 10 of the multifunctional vibrating actuator 20 is further configured to be mounted on the surface of the circuit board 21 using the bracket after the bracket is fixed on the surface of the circuit board with the terminals 13 and 14, fig. 10 attached to the housing 10 electrically connected to the circuit board 21. Furthermore, the use of "configured to" in lines 10 and 13 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

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Note: Maeda teaches the adhesive from annular clearance 12d is acrylic anaerobic adhesive. There are a lot of acrylic anaerobic adhesive on the market which permit disassembly. See, for example a web-site of the "Loctite Anaerobic Adhesives" company.

Or

Regarding claim 1: Maeda discloses in fig. 10 -12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, the multifunctional vibrating actuator 20, fig. 1-7 having a diaphragm 8, a magnetic circuit (col. 1: 44-45) that is positioned facing the diaphragm 8 and that forms a magnetic path, a suspension 1 that supports the magnetic circuit, a housing 10 that supports the diaphragm 8 and the suspension 1, and voice coil 7 that produces magnetic drive that operates between the diaphragm 8 and the magnetic circuit, and having terminals 13 and 14, fig. 10 that are attached to the housing 10, fig. 1 and that are electrically connected to the voice coil 7, the structure for mounting comprises: a bracket 12 configured to be fixed to the surface of the circuit board 21, fig. 11 by solder reflow (col. 11:55-57), wherein tile housing 10 of the multifunctional vibrating actuator 20 is further configured to be mounted on the surface of the circuit board 21 using the bracket. Furthermore, the use of "configured to" in lines 10 and 13 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly teach the housing of the multifunctional vibrating actuator is configured to be detachable from the bracket so as to allows the bracket to be fixed on the surface of the circuit board without the multifunctional vibrating actuator, wherein tile housing of the multifunctional vibrating actuator is further configured to be mounted on the surface of the circuit board using the bracket after the bracket is fixed on the surface of the circuit board with the terminals attached to the housing electrically connected to the circuit board, wherein tile housing of the multifunctional vibrating actuator is further configured to be mounted on the surface of the circuit board using the bracket after the bracket is fixed on the surface of the circuit

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board with the terminals attached to the housing electrically connected to the circuit board.

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the housing of the multifunctional vibrating actuator is configured to be detachable from the bracket so as to allows the bracket to be fixed on the surface of the circuit board without the multifunctional vibrating actuator, wherein tile housing of the multifunctional vibrating actuator is further configured to be mounted on the surface of the circuit board using the bracket after the bracket is fixed on the surface of the circuit board with the terminals attached to the housing electrically connected to the circuit board, wherein tile housing of the multifunctional vibrating actuator is further configured to be mounted on the surface of the circuit board using the bracket after the bracket is fixed on the surface of the circuit board with the terminals attached to the housing electrically connected to the circuit board, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

Regarding claim 9/1: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, Fig. 1 (Maeda, as modified by the teaching of Suyama) is mounted using the mounting structures described in claim 1 to mount the multifunctional vibrating actuator 20 on the circuit board 21, Fig. 12.

4.2. Claims 2, 5, 6, 9/2, 9/5 and 9/6 are rejected under 35U.S.C. 103(a) as being unpatentable over Maeda in view of Suyama.

Regarding claim 2: Maeda discloses in fig. 10-12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, in which a mounting position of the multifunctional vibrating actuator 20 relative to the circuit board 21 is set on a surface near one end of the circuit board, and in which the bracket 12 being fixed by

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solder reflow to the surface of the circuit board 21, wherein the multifunctional vibrating actuator and is configured to be mounted on the circuit board 21 using the bracket 12. Furthermore, the use of " configured to " in line 8 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly teach two things:

- 1) there is a projection on a surface of a bracket that faces the circuit board, and the bracket is being held in place on the surface of the circuit board by the projection; and
- 2) the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board by solder reflow so as to avoid exposing the multifunctional vibrating actuator to solder reflow.

Maeda teach there is a projection on the surface (terminals 13f, 14f, Fig. 9 are about 0.05mm lower than the rear surface 12e of the bottom of the bracket 12) device is held in place by the projection (col. 10: 39-49).

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention there is a projection on a surface of a bracket that faces the circuit board, and the bracket is being held in place on the surface of the circuit board by the, as taught by Maeda, in order to hold bracket in place by the projection, as taught by Maeda (col. 10: 46-49).

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board by solder reflow so as to avoid exposing the multifunctional vibrating actuator to solder reflow, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

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The examiner notes with respect to claim 2 that a limitation " the bracket being fixed by solder reflow to the surface of the circuit board while the bracket is being held in place on the surface of the circuit board by the projection" is a process limitation in the product claim. Such process limitations define the claimed invention over the prior art only to the degree that they define the product itself. A process limitation cannot serve to patentably distinguish the product over the prior art, in the case that the product is the same as, or obvious over, the prior art. See *Product-by-Process* in MPEP 2113 and 2173.05(p) and *In re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Regarding claim 5: Maeda discloses in fig. 10-12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, in which flat electrodes 21b and 21c formed on a surface of the circuit board 21 are formed with different ratios of length measurement to width measurement, and a positive electrode 21b and a negative electrode 21c have positions that are the same in a length direction, wherein the multifunctional vibrating actuator is configured to be mounted on the circuit board 21 using the bracket 12. Furthermore, the use of " configured to " in line 6 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly teach the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board.

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is configured to be detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

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Regarding claim 6: Maeda discloses in fig. 10- 12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, in which flat electrodes 21b and 21c formed on a surface of the circuit board 21 are formed with different ratios of length measurement to width measurement, wherein the multifunctional vibrating actuator 20 is configured to be mounted on the circuit board 21 using the bracket 12. Furthermore, the use of " configured to " in line 6 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly teach the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board.

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

Although Maeda doesn't explicitly teach that a positive electrode and a negative electrode have positions that differ in a length direction, it is obvious that two electrodes always have two different locations on the circuit board. Further at the time the invention was made, it was well known that design of lay out of the electrodes on the circuit board permits variations.

Therefore it would have been obvious to one of ordinary skill in the art, at time the invention was made to have the positive electrode and the negative electrode have positions that differ in the length direction, in order to provide easy assembly and since it has been held to be within the general skill of a worker in the art to make rearrangement of parts as a matter of obvious engineering choice. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950); and in re Kuhle, 526 F.2d 553, 188 USPQ 7

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(CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

Regarding claim 9/2: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, Fig. 1 (Maeda, as modified by the teaching of Suyama) is mounted using the mounting structures described in claim 2 to mount the multifunctional vibrating actuator 20 on the circuit board 21, Fig. 12.

Regarding claim 9/5: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, Fig. 1 (Maeda, as modified by the teaching of Suyama) is mounted using any of the mounting structures described in claim 5 to mount the multifunctional vibrating actuator 20 on the circuit board 21, Fig. 12.

Regarding claim 9/6: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, Fig. 1 (Maeda, as modified by the teaching of Suyama) is mounted using any of the mounting structures described in claim 6 to mount the multifunctional vibrating actuator 20 on the circuit board 21, Fig. 12.

4.3. Claims 3, 4, 8, 9/3, 9/4 and 9/8 are rejected under 35U.S.C. 103(a) as being unpatentable over Maeda in view of Suyama and in view of Hatanaka et al. (US 6229249) hereinafter Hatanaka.

Regarding claim 3: Maeda discloses in fig. 10-12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, in which a surface of a bracket 12, fig. 1, that faces the circuit board 21, fig. 10-12 has contacts 21a that contact solder applied to the surface of the of the circuit board 21 and are fixed by solder reflow, and multiple bracket contacts 12a, fig. 1 are set at an edge of a bracket 12 (col. 5:26-30), wherein the multifunctional vibrating actuator 20, is configured to be mounted on the circuit board 21, fig. 10-12 using the bracket 12. Furthermore, the use of " configured to " in line 6 makes what follows a functional statement and not a

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positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly disclose three things:

1) two or more contacts; and

2) convex contacts; and

3) the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board by solder reflow, so as to avoid exposing the multifunctional vibrating actuator to solder reflow.

Hatanaka teaches two or more contacts 11 – 14 on body 1, Fig. 5 (col. 10: 1-6).

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention two or more contacts, as taught by Hatanaka, in order to provide connection the multifunctional vibrating actuator to the circuit board.

Hatanaka teaches different shapes of contacts, Fig. 18 - 20. Therefore, at the time the invention was made, it was well known a lot of different shapes of the contacts. Further, it has been held In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) that change in shape of the configuration of the claimed device was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to change the shape of the contacts disclosed by Maeda to convex or any other shape in order to provide connection the multifunctional vibrating actuator to the circuit board and since the courts have held that change in shape of the configuration, without any criticality, is within the level of skill in the art as particular shape claimed by applicant is nothing more than one of numerous shape that a person of ordinary skill in the art would have found obvious to provide using routine experimentation based on its suitability for the intended use of the invention, See in re Dailey, 149 USPQ 47 (CCPA 1966).

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is

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detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board by solder reflow, so as to avoid exposing the multifunctional vibrating actuator to solder reflow, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

Regarding claim 4: Maeda discloses in fig. 10-12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, in which multiple bracket contacts 12a, fig. 1 are set at an edge of a bracket 12 (col. 5:26-30), wherein the multifunctional vibrating actuator 20, fig. 10-12 is configured to be mounted on the circuit board 21 using the bracket. Furthermore, the use of "configured to" in line 4 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly teach the multifunctional vibrating actuator is detachable from the bracket is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board.

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the multifunctional vibrating actuator is detachable from the bracket is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

Regarding claim 8: Maeda discloses in fig. 10-12 a structure for mounting a multifunctional vibrating actuator 20 on a circuit board 21, in which a flat surface of a

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bracket is formed, and there are on the flat surface of a bracket contact 21a, that contact the solder applied to the surface of the circuit board and that are fixed by solder reflow, wherein the multifunctional vibrating actuator 20, fig. 1 is configured to be mounted on the circuit board 21, fig. 11 using the bracket 12. Furthermore, the use of " configured to " in line 7 makes what follows a functional statement and not a positive limitation and only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

except Maeda doesn't explicitly disclose three things:

- 1) the bracket is formed with an unequal length/width ratio; and there are on the flat surface of the bracket on a longer axis of a length/width ratio two or more contacts; and
- 2) convex contacts; and
- 3) the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board by solder reflow so as to avoid exposing the multifunctional vibrating actuator to solder reflow.

Hatanaka teaches (col. 10: 1-6) the body 1 is formed with an unequal length/width ratio, and two or more contacts 11 – 14 on body 1, Fig. 5

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the bracket is formed with an unequal length/width ratio and there are on the surface of the bracket rim on the longer axis of the length/width ratio two or more contacts, in order to provide connections with portable terminal equipment.

Hatanaka teaches different shapes of contacts, Fig. 18 - 20. Therefore, at the time the invention was made, it was well known a lot of different shapes of the contacts. Further, it has been held In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) that change in shape of the configuration of the claimed device was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to change the shape of the contacts disclosed by Maeda

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to convex or any other shape in order to provide connection the multifunctional vibrating actuator to electrical device and since the courts have held that change in shape of the configuration, without any criticality, is within the level of skill in the art as particular shape claimed by applicant is nothing more than one of numerous shape that a person of ordinary skill in the art would have found obvious to provide using routine experimentation based on its suitability for the intended use of the invention, See In re Dailey, 149 USPQ 47 (CCPA 1966).

Suyama teaches in fig. 28, 31 the housing 100 of the vibrating actuator is detachable from the bracket 90.

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made for Maeda to include in his invention the multifunctional vibrating actuator is detachable from the bracket and is configured to be mounted on the circuit board using the bracket after the bracket is fixed to the circuit board by solder reflow so as to avoid exposing the multifunctional vibrating actuator to solder reflow, as taught by Suyama in order to provide easy assembly and disassembly of the vibrating actuator.

Regarding claim 9/3: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, fig. 1 (Maeda, as modified by the teaching of Suyama) is mounted using any of the mounting structures described in claim 3 to mount the multifunctional vibrating actuator 20 on the circuit board 21, fig. 12.

Regarding claim 9/4: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, fig. 1 (Maeda, as modified by the teaching of Suyama) is mounted using any of the mounting structures described in claim 4 to mount the multifunctional vibrating actuator 20 on the circuit board 21, fig. 12.

Regarding claim 9/8: A portable terminal equipment (col. 1:12-16) in which the multifunctional vibrating actuator 20, fig. 1 (Maeda, as modified by the teaching of

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Suyama) is mounted using any of the mounting structures described in claim 8 to mount the multifunctional vibrating actuator 20 on the circuit board 21, fig. 12.

Allowable Subject Matter

5. Claims 7 and 9/7 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The limitations “ there being a tab on the end of the housing that fits with the rim and multiple first cut-outs in the rim that fit with the tab, the multiple first cut-outs being formed as a unit connected by a second cut-out lower than a height of the multiple first cut-outs “ in combination with other claimed limitations in independent claim 7 is not disclosed or suggested by the prior art of record.

Claim 9/7 is directly dependent upon claim 7.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuriy Semenenko whose telephone number is (571) 272-6106. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on (571)- 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. S./

Examiner, Art Unit 2841

/Jeremy C. Norris/

Primary Examiner, Art Unit 2841